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Integrating Agency and Resource Dependence Theory:

Firm Profitability, Industry Regulation, and Board Tasks Performance

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ABSTRACT

Boards of directors are key governance mechanisms in organizations and fulfil two main tasks: monitoring managers and firm performance, and providing advice and access to resources. In spite of a wealth of research much remains unknown about how boards attend to the two tasks. This study investigates whether organizational (firm profitability) and environmental factors (industry regulation) affect board tasks performance. The data combine CEOs' responses to a questionnaire, and archival data from a sample of large Italian firms. Findings show that past firm performance is negatively associated with board monitoring and advice tasks; greater industry regulation enhances perceived board tasks performance; board monitoring and advice tasks tend to reinforce each other, despite their theoretical and practical distinction.

Keywords: board accountability; board task performance; resource dependency theory board monitoring; attention based view; contingency view

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1. Introduction

The roaring collapses of highly profitable firms like Enron and Parmalat in the early 2000s sounded as corporate governance paradoxes: their boards were composed of prominent and knowledgeable managers, academics and professional, and ticked all the boxes of the best governance practices. Nonetheless, they filed for bankruptcy with multi-billionaire losses for their shareholders, bondholders, workers and the society at large (Coffee, 2005). These cases cast doubts on the collective understanding of what boards do, prompting numerous calls to move beyond the demographics and provide a systematic analysis of board behaviour (Dalton, Hitt, Certo & Dalton, 2007).

Despite the wealth of research on boards of directors, there is still a quest for a deeper understanding of what drives board task performance (Huse, 2007). Boards are expected to perform two tasks: monitoring managers and firm performance, and providing advice and access to resources (Hillman & Dalziel, 2003). Prior studies explaining board monitoring or advice tasks rely upon board composition (Le, Walters & Kroll, 2006), or micro-level determinants - as board processes and cognitive conflicts - (Forbes & Milliken, 1999), and macro-level factors (Minichilli, Zattoni, Nielsen & Huse, 2012). In almost all instances, researchers analyse monitoring and advice tasks separately. More recently the literature highlights the need to move beyond this "static view", integrating the two perspectives underlying board monitoring (Agency theory) and advice (Resource Dependence theory) tasks (Hillman & Dalziel, 2003). This is further reinforced by Ocasio' s attention-based view (ABV), suggesting that decision-making bodies as the board of directors do not constantly engage in all activities, "but place different emphasis on their tasks according to the various

issues and answers they focus on" (1997: 188). Ocasio indicates that boards' engagement into the different tasks depends on the contextual conditions boards and organizations are embedded into (Ocasio & Joseph, 2005), thus sparking a number of studies using a contingency approach to boards (Filatotchev & Nakajima, 2010).

Building on these perspectives, this study seeks to empirically assess whether past firm performance and industry regulation affect board monitoring and advice tasks. The data are drawn from a sample of Italian largest companies, whose CEOs responded to a detailed questionnaire. Findings are in line with prior works indicating that board demography does not affect board monitoring and advice tasks (Finkelstein & Mooney, 2003), and in addition show that past performance is negatively associated with board monitoring and advice, whereas greater industry regulation enhances both tasks.

This study enhances understanding of how boards operate: first, by providing evidence of the effects of past firm performance on board monitoring and advice tasks, whereas most of the existing literature is concerned with the effects of board behaviour on the subsequent performance. Second, by showing that greater industry regulation increases a board's attention towards monitoring and advice tasks. Third, by suggesting that despite the different theoretical underpinnings, and distinct measurement construct, board monitoring and advice tasks are strongly correlated (boards that are perceived to monitor tend to be considered active in their advice task as well).

These findings have implications for practice: the literature does not posit the dichotomous view of the board as monitor versus advisor; rather, researchers posit boards to be either active in the two tasks or less engaged overall. A more general concern arises with boards in high performing firms: according to the findings these are reluctant to perform the expected tasks; ultimately, there is a potential threat for high performing firms that board hold back, thus imposing higher vigilance on boards' engagement.

The remainder of the paper is structured as follows. Section two illustrates the theoretical background and derives hypotheses. Section three follows a description of the sampling procedure and the method. Section four reports the findings before discussing implications for theory and practice. Section five concludes with the limitations and possible avenues for future research.

2. Board Tasks Performance

Board tasks performance is defined as the "board's ability to perform its control and service tasks effectively" (Forbes & Milliken, 1999: 493). These tasks refer to the activities a board performs to comply with regulation and shareholders' expectations. The two tasks are theoretically distinct and are made up of different activities. Board monitoring is rooted into agency theory (AT) (Fama & Jensen, 1983): boards are expected to monitor activities and decisions in order to ensure shareholders' interests are met. The watchdog function is amplified in the case of separation between ownership and control, that is, when managers do not bear a major stake of wealth effects of their decisions (Coffee, 2005). However, the legal nature of the board imposes monitoring as a primary task for the board regardless the organizational forms (Bainbridge, 2002): directors are required to oversee a firm's activities as a part of their "duty of care" towards the company and all key stakeholders (Blair, 2012).

Beside the monitoring task, resource dependence theory (RDT) proposes that boards provide access to resources that are not otherwise available (Pfeffer & Salancick, 1978); RDT sees boards as asset of the firm contributing to sustained value creation (Hillman, Withers & Collins, 2009). The advice or resource provision task includes advice on strategic initiatives, an active involvement in decision-making, and follow-up on strategic choices.

The two tasks stem from different theoretical traditions, suggesting a stylized model of what boards (should) do, and how to enhance monitoring and advice respectively. The

distinction affects both researchers' understanding of boards, and a firm' search for good directors: board monitoring emphasize directors' independence and ability to challenge managers who are not acting in the best interests of stakeholders; board advice envisions that board capital is a key factor in enhancing advice and resource provision (Sundaramurthy & Lewis, 2003).

The theoretical distinction underlying the two tasks and its implications in terms of regulatory provisions and expected board behaviour shapes the development of research. Traditionally governance scholars explored how board composition impacts on firm or board tasks performance (Daily, Dalton & Cannella, 2003). The so-called "usual suspects" (board independence and size, CEO duality, board ownership) account for a limited part in explaining board tasks performance (Forbes & Milliken, 1999), whilst board processes, cognitive conflicts and effort norms are better predictors of engagement (Minichilli, et al., 2012). Studies on boards of directors downplay the role of firm or context specific conditions on board behaviour (Bamberger, 2008), and the numerous calls for additional research overcoming these limitations have only received partial fulfilment (Dalton & Dalton, 2011).

Ocasio (1997) offers an alternative view and challenges the idea of boards being constantly involved into their tasks: the ABV proposes that boards, as all decision making bodies, selectively choose where to address their efforts. Such selectivity is due to time constraint and prioritization, board members' bounded rationality and limitation in information gathering, thus impairing boards' ability to perform their tasks. The work of Hillman, and Dalziel (2003) and Sundaramurthy, and Lewis (2003) further develops this view, highlighting the paradox of control and collaboration within board of directors, and proposes an integration of the two views. The application of ABV to the understanding of decision–making bodies is yet more profound: Ocasio identifies patterns to ascertain how boards distribute and regulate their attention to their tasks (focus of attention) through the

development of the concept of situated attention. What tasks boards focus on, and what they do, depends on the specific context or situation they find themselves in (1997:188). Barnett (2008) provides additional theoretical backing to this stream of research, indicating that board configurations and actions are highly dependent on the set of internal and external conditions that firms face.

Recent empirical works support these intuitions: Tuggle, and colleagues (2010) find significant variation in how boards prioritize board monitoring according to changing profitability. Zhang (2010) explores the board transitioning between information seeking and strategic actions, when process-based conditions vary. Yu, Engelman, and Van den Ven (2005) build on ABV and observe how organizational structure influences aspects of the merger integration process managers attended to over time.

2.1 Firm profitability and board tasks performance

This study investigates the effects of firm and industry characteristics on board monitoring and advice tasks. With respect to boards' allocation of attention to monitoring and advice tasks, firm performance and industry regulation are considered as relevant factors (Boyd, Haynes, Hitt, Bergh & Ketchen, 2012): first, past and current firm performance matter because of the use by directors as a means to assess managerial effectiveness (Walsh & Seward, 1990). Second, industry regulation matters to boards because of the emphasis on interactions, compliance to norms and resource provisions required, conditional on the different levels of regulation (Cho & Hambrick, 2006).

Past firm performance influences boards' engagement into monitoring and advice tasks. This is consistent with evidence of a bi-directional relationship of firm performance and governance structures (Platt & Platt, 2012): the board and CEO affect firm performance, but profitability also affects them. However, while boards' effects on subsequent firm

performance have received wide attention (Pugliese, Bezemer, Zattoni, Huse, van Den Bosch & Volberda, 2009), the impact of past and current performance on board tasks is not fully exploited.

Firm profitability is generally employed to assess how well (or poorly) executives operate. A few studies subvert this logic by exploring how firm profitability affects board composition and structure (Gales & Kesner, 1994; Mueller & Barker, 1997). These examine extreme cases of bankruptcy, showing that negative returns often lead to changes in board and leadership structures (Daily, 1995). This study takes a different stand and posits that boards in high (low) performing firms behave differently in relation to their focus on monitoring and advice tasks. To our knowledge, no study has investigated whether past and current profitability affects boards' monitoring or advice tasks.

In poorly performing firms, boards are supposed to be active monitors. This role is fully consistent with predictions of AT indicating that the substitution of poorly performing managers is one of the mechanisms in place to ensure shareholders' interests are met (Walsh & Seward, 1990). Poor performing firms require a more vigilant approach from their boards: managers who caused the poor performance should be evaluated, and fired, if necessary. This is also backed by a legal perspective: directors of distressed firms are more likely to engage in monitoring activities, reducing the threat of litigation due to a breach in their duty of care towards shareholders (Bainbridge, 2002).

The resource dependence theory (RDT) suggests that boards act primarily as providers of resources that are lacking internally, adjusting their behaviour to organizational and environmental contingencies (Hillman & Dalziel, 2003). Limited empirical evidence shows that past performance affects board's advice task (Boyd, 1995). When firms experience impaired performance, the board will search for organizationally relevant gains from operating both inside and outside the board and revisit the firm strategic direction

(Geletkanycz & Boyd, 2011). In addition, boards are required to securing access to valuable resources (Boeker & Goodstein, 1991): as part of the advice task, boards support the CEO and the executive team in making informed choices about future directions and subvert current conditions (Carpenter & Westphal, 2001).

HP1a: Poor firm performance associates positively with board monitoring and advice tasks.

Whereas both a theoretical rationale and early empirical evidence show that poor performance triggers board monitoring and advice, little is known about board behaviour in high performing firms (Daily, et al., 2003). The dearth of studies is due in part to the nature of governance theories calling for a board's action only when things go bad (Coffee, 2005). A commonly assumed assumption is that boards of directors in profitable firms are discharged from tight monitoring responsibilities: "if there is nothing broken, there is no need for fixing it" (Leblanc & Gilles, 2005:175). Wesphal, and Zajac (1995, 1998, 2001) attribute this to a great degree of *symbolism* in the Board-TMT relationship: CEOs of well performing firms are less subject to monitoring and scrutiny and their choices find generally large consensus. Tuggle, et al, (2010) find that negative deviation from prior performance increases a board's attention to monitoring, while positive deviation reduces it.

At a more general level, this perspective is consistent with the evidence that the probability of disciplinary actions of the boards is more pronounced in the case of poor performance (Baghat & Bolton, 2008). This suggests that (independent) boards are more prone to refrain from monitoring if they consider firm performance to be satisfactorily. Turning attention to board advice in high-performing firms, Ocasio (1997) describes how decision-makers' cognition of the current status of a corporation fosters a transition between tasks. Profitable firms require more attention towards new investments and opportunities and

the main challenge posed on directors is shifting into expansion and increasing productivity; directors reduce their emphasis on financial control and monitoring activities, focusing their attention towards the achievement of a company' s growth objectives (Hillman, 2005). Boards in successful companies tend to emphasize the pursuit of new strategic initiatives and ventures thus reducing the control function (Lynall, Golden & Hillman, 2003).

HP1b: High firm performance associates negatively with board monitoring task and positively with board advice task.

2.2 Industry regulation and board tasks performance

Government policy, regulation and enforcement are major forces in the business environment. Firms deal with environmental features such as industry regulation and uncertainty that shape boards' search for external legitimacy and resource provision (Boyd, 1990). Pfeffer (1972) asserts that a board reflects the firm's external dependencies. Governance scholars extensively rely upon his view and suggest that boards develop as efficient responses to the firm's environment (Abebe, Angriawan & Liu, 2011). Industry characteristics are among the major forces shaping companies' structures, top-management teams and boards of directors (Dess & Beard, 1984). Research shows that uncertainty, level of competition and regulation affect board size, outsider ratio, and interlocks (Boyd, 1995). Also, shifts in the regulatory or technological environment cause important changes in board composition and leadership structure (Hillman, Cannella & Paetzold, 2000).

Nevertheless, extant studies do not explore the effects of industry regulation on board monitoring and advice tasks. Firms operating in regulated industries are subject to compliance to strict norms and rules affecting various areas of a corporation's life (e.g. production, accountability and reporting, pricing and level of employment). Regulators view board oversight as complementary to supervision, and boards become the mechanism through which

compliance and accountability are ensured (Adams & Ferreira, 2008). This is consistent with the "regulatory pressure hypothesis" suggesting that board monitoring is heightened in highly regulated industries (Becher & Frye, 2011). Hagendorff, Collins, and Keasey (2010) find that such complementarity exists in the banking sector in a sample of 13 countries. Also, Becher, and Frye (2011)'s study of IPOs documents lower board monitoring after industry deregulation in multiple sectors. In addition a firm's ability to compete in the market is related to the fulfilment of what is required of regulators and legislation imposing the supervision of a company's operations in order to avoid incurring in sanctions and litigation costs (Millstein & MacAvoy, 1998): this is witnessed by Pfeffer's findings that boards tend to appoint directors with legal expertise in regulated industries in order to reduce threats of litigation (1972).

Also, regulation restricts some of the strategic options available and most of the decision-making and planning functions are shifted away from a firm's managers and boards to public officials that choose profitability levels and intensity of competition (Lang & Lockhart, 1990). Strategic alternatives are only partially left to the managers: if not entirely, major strategic initiatives require negotiation or approval of the regulatory body. HP2a: Greater industry regulation associates positively with board monitoring task, and negatively with board advice task.

On the other hand, firms operating in less regulated and open to competition industries face different types of challenges: the lack of regulation reduces the attention towards monitoring, thus alleviating the board from the monitoring function (Boyd, 1995). At the same time they experience a more direct control over key factors affecting performance. In such industries the level of competition, the difficulty to foresee the future of the sector, and the threat of newcomers enhance uncertainty (Lang & Lockhart, 1990): firms struggle to adapt to the continuous and sudden changes within the industry that might be outside of their

control, and directors are required to act as providers of resources that are lacking internally (Hillman, 2005). In order to increase their proximity to key resources, firms tend to empower directors to bring in valuable resources, and to guarantee a company' success and growth. A board needs to fill in the gap with subjects whose choices are likely to affect firm's positioning and competitive advantage (Hillman, et al., 2000). RDT posits that this role is enhanced through directors with superior knowledge of the rules, being able to advise managers in taking decisions and build sustained competitive advantage.

The shift from monitoring towards more of an entrepreneurial orientation is shown by Cho, and Hambrick (2006) in the context of a deregulation in the US airline industry in the 1980s, when directors (and managers) switched their attention from meeting regulators' requirements toward the search for new profitable niches.

HP2b: Lower industry regulation associates negatively with board monitoring task, and positively with board advice task.

3. Methods

3.1 Sample selection and data collection

The data were gathered through a questionnaire addressed to the CEOs of the top 2,000 Italian companies, ranked by turnover, at the end of 2004. Previous research on boards of directors shows that a low response rate (below 20%) is still acceptable: board members are busy professionals and are reluctant to reveal private information despite confidentiality and secrecy agreements in place. In order to increase the response rate, we followed three steps in designing of the survey: a pre-test with 12 executives fine-tuned the language and content of questions. The questionnaire included a presentation letter detailing the main purpose of the study. A reminder was sent out to the non-responding firms three months after the first round. At the end of the data collection process we received 264 valid responses, with

a 13% overall response rate, which is consistent with previous studies (Finkelstein, Hambrick & Cannella, 2009).

While the cover letter ensured confidentiality and anonymity in revealing the data only in aggregate form (Posdakoff, MacKenzie, Lee & Posdakoff, 2003), companies needed to be identifiable to allow researchers matching primary data with archival, accounting-based information. Financial data from 2001-2004 were collected through ORBIS, a widely used database providing a wealth of financial and governance information about the companies.

OLS regressions are employed to test hypotheses. The joint use of archival and survey data with temporal lags minimizes effects of common method variance (Payne, Benson & Finegold, 2009). The Kolmogorov-Smirnov two-sample test is employed to check for selection bias, and compared responding to non-responding firms. Results suggest that the two sub-samples of responding and non-responding companies are not significantly different across several dimensions: industry representation, company size, profitability and age, family ownership.

The only difference refers to the "listing status": 25% of firms included in the final sample are listed entities, while they account for 13% of the initial population. This is not likely to affect the results as a considerable portion of non-listed firms is in the final sample, and a control for the listing status is included in the models. Lastly, to ensure rigor and increase significance of the analyses, observations with missing data on dependent variables were handled by listwise deletion: "missing data were identified if respondents had omitted to answer on any single items referring to the construct of monitoring and advice tasks".

The Italian setting

Italy is an appropriate setting to conduct research on boards of directors: first, since a decade the Italian regulators engaged into a great debate that resulted into increasing pressure

on board scrutiny (Enriques & Volpin, 2007). Second, the Italian corporate governance system resembles other systems (i.e. France, Spain, Portugal) in Europe as well as in Asia that are characterized by a weak disciplining role of capital markets and a stronger reliance upon internal governance mechanisms (De Jong, 1997). Italian corporations are legally required to have a board of directors who is appointed by the general shareholders' assembly. All companies have a statutory board and in the vast majority of the cases, companies would rely upon an external auditor to verify compliance of financial statements to accounting standards. Listed companies are subjected to oversight by the market regulator (CONSOB, the equivalent of US SEC) who issued in 1999 and 2002 a version of the "code of best practice". The code is widely adopted and represents a benchmark also among large non-listed companies; this increased homogeneity in governance practices, including higher transparency in the appointment of directors, larger proportion of independent, and the adoption of board committees aligns Italian corporate law to the majority of regulation in developed countries (Zattoni & Cuomo, 2008).

Dependent Variables: measures of board monitoring and advice tasks

The two dependent variables are computed through multiple items measured in the questionnaire survey on a 5-point Likert scale. CEOs were asked to rate multiple items that relate to the two main concepts (latent constructs). The dependent variables are perceptual measures of board monitoring and advice tasks (Knockaert & Ucbasaran, 2013). Perceptual measures are often used to measure board roles (Nicholson & Newton, 2010; Stevenson & Radin, 2009; van Den Heuvel, van Gils & Voordeckers, 2006) and more generally in the entrepreneurial domain.

Further, Lyon, Lumpkin, and Dess suggest that "one potential advantage of perceptual approaches is a relatively high level of validity because researchers can pose questions that

address directly the underlying nature of a construct" (2000: 1058). Also, they highlight the relevance of the data-source: these measures come from the most knowledgeable individual in the organization, and enhance their fit with the investigated concepts. Nevertheless, given the difficulty in capturing multi-dimensional concepts as in the form of monitoring and advice tasks, an exploratory factor analysis (EFA) is employed to reduce multi-items variables into single and clearly identifiable factors (Hair, Black, Babin & Anderson, 2010: 99). This technique is extensively used in corporate governance research because of the specific features of the field, where hardly any single item or measure is an exhaustive proxy for the underlying concept to be measured (Larcker & Rusticus, 2010).

The questionnaire includes nine items referring to various activities in which a board engages; in order to minimize the risk of "serial answers" and "social desirability bias", the items are inserted at different places in the questionnaire. The EFA confirms the existence of two main factors (eigenvalue > 1), and that the questionnaire items and latent constructs are consistent with existing theories and measures in different contexts (van Ees, van Der Laan & Postma, 2008).

The two main constructs resulting from EFA are identifiable as CEOs' perception of board monitoring and advice tasks. All factors have acceptable loading scores on each component of the latent construct, indicating a high association with the latent construct itself (Zhang, 2010): the variable "monitoring task" is the mean of three items. CEOs rated the extent to which the board: keeps itself informed about financial position of the firm; oversees that the operations are properly enacted; and monitors the CEO (Cronbach' $\alpha = .781$). The variable "advice" is the mean of four items about the different aspects a board is expected to contribute to. CEOs rated the extent to which the board: provides advice to the management; discusses alternative options; takes strategic decisions; and supervises all strategic phases (Cronbach' $\alpha = .832$). Measuring CEOs' perception of board monitoring and advice, rather

than actual task performance, raises potential concerns related to the self-attribution bias (i.e. the CEOs could downplay board's contribution because of their status and power, or even unintentionally).

In the attempt to minimize these concerns, we test whether CEOs' perception of board monitoring and advice is affected by potential proxies for CEO power and influence: CEO tenure and age, or by the overall number of interlocks within the business group. Correlation analysis (Table 1 Panel B) shows that there are no significant patterns in the data: CEO age, tenure and interlocks do not correlate with CEOs' perception of monitoring or advice tasks. Hence, we rule out the risk that CEOs' assessment of board task performance is affected by power or self-attribution.

INSERT TABLE 1 ABOUT HERE

Independent and Control Variables

The two main predictors of board tasks performance are firm past performance and industry regulation. The data for the two variables were drawn from archives and the survey. "Past firm performance" (profit) is the average Return on Equity (ROE) in the three years preceding the administration of the questionnaire (2001 to 2003). ROE is the most relevant figure from the equity-holders' perspective, whom boards pay attention to, and it is used as an overall profitability measure for corporations capturing both operating and financial results (Shen & Lin, 2009; Brick & Chidambaran, 2010). This study primarily relies on data from financial statements: first, for the sake of comparability, accounting measures are employed to assess firm performance because the sample includes both listed and unlisted companies;

second, stock market based performance are susceptible of investors' anticipation and the risk of suffering a downward bias due to the observation period (Baghat & Bolton, 2008). In order to test the effects of performance on board monitoring or advice tasks, the sample is partitioned into quintiles (Ramdani & van Witteloostuijn, 2010), and identified firms whose profitability falls within the first (h_prof) or the last quintile (l_prof). An industry-adjusted measure of ROE is also employed: this is computed as the average ROE (2001-2003) of the relevant $Firm_i$ minus the average ROE of its industry (identified through the ATECO codes). The analyses – untabulated in the paper – confirm our results.

"Industry regulation" (ind_reg) indicates whether a firm operates within a sector that is subject to government regulation. This is measured by asking CEOs whether the firm is subjected to a highly regulated environment (5 on a 5-point scale) or not (1 on a 5-point scale). Three main reasons justify the use of this metric over a dummy variable at industry level (regulated versus non-regulated): first, industries cannot be classified as regulated or not regulated with a clear-cut criterion (King & Lenox, 2000). There are different levels of regulation between the two extremes (e.g. free competition and regulation); some industries might be only partially regulated: the food industry is subject to health regulation and quality checks on the products, while in the construction and manufacturing health and safety are a primary concern. Others instead, like public utilities are regulated even in terms of fares, employment levels, dividend policies and strategic choices. Another reason is the superior knowledge of the CEO in assessing whether the main industry in which a company operates is more or less regulated: this is particularly relevant in a sample that includes conglomerates operating in different industries with varying levels of regulation. A third reason is strictly related to the research design of this study: using a scaled measure for industry regulation, allows discriminating between firms operating in highly regulated or non-regulated industries and benchmark them with the rest of the population.

In order to check whether CEOs' indications are reliable, CEOs' responses are matched to the traditional classification of regulated versus non-regulated industries. The study employs the ATECO codes and classification from 2002 to cluster firms in their respective industries. We found 13 main industries at a two-digit code level. Spearman' index shows a high overlap between the two (.28 at 0.01 level) suggesting that the measure is a reliable proxy. In addition, we checked that firms operating in regulated (or non-regulated) industries had lower (higher) Return on Asset (ROA) and Return on Sales (ROS) standard deviation in the years from 2001 until 2003. Results show that firms operating in highly regulated industries have lower variance in operating profits, thus suggesting they are more predictable, which is a feature of regulated environments. Lastly, to perform our analyses, a series of dummies identify firms operating in highly regulated industries (h_ind_reg) or in low regulated ones (l_ind_reg).

A number of control variables are employed in this study: they refer to firm and board features. Four different firm-level attributes are taken into account: Firm Size (size) is computed as the logarithmic transformation of the average turnover in 2001-2003. Family ownership (fam) is a dummy variable indicating whether one family holds at least 30% of shares (1), or not (0). The listing status (listed) of corporations is a dummy variable indicating whether the company has been consistently listed during the three years prior to the study (1), or not (0). The institutional ownership (inst_own*)* is also included because of the potential disciplining function on the board of directors' monitoring or advice tasks: the variable sums up the total percentage of shares held by the banks, mutual funds and venture capitalists.

A number of board-level controls are included: CEO duality (CEO_dual) indicates whether the CEO is also the Chairperson of the board (1), or not (0). This is an important feature and alters the dynamics between the top management team and outside directors (Boyd, 1995). The size of the board (bd_size) is a continuous variable winsorized at 95%

value to reduce the impact of extreme values: three firms have more than 25 board members and three less than 2; in order to keep the observations within the sample, these are attributed to the top (bottom) values of the distribution at 5 and 95 percentage. Board independence (bd_outs) is calculated as the ratio of independent, unaffiliated and non-executive directors sitting on the board over the total number of directors. Directors' ownership (bd_own) indicates the ratio of directors with shares in the company over the total number of directors. Board regulation (bd_reg) is a dummy variable based on the CEO's indication about whether the board has formal regulation in place suggesting how it must operate (1), or not (0). This is a relevant feature in board research (Brick & Chidambaran, 2010) as it is likely to put restrictions or enable a board' s ability in performing its key tasks. Board meeting (bd_meet) is the number of meetings held by the board during the year prior to the survey. This variable is winsorized at 95% because two firms had more than 20 meetings in a year and five only one: to keep the observations within the sample, these were attributed to the top (bottom) values of the distribution at 5 and 95 percentage.

INSERT TABLE 2 ABOUT HERE

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4. Results

Descriptive statistics and univariate analyses

The descriptive statistics in Table 2 indicate that boards have on average 7 members, CEO duality is not a common practice (30.7%), and seldom boards regulate the way they operate (33.3%). A number of tests are performed to check for potential differences between listed versus non-listed firms and between family-firms versus non-family firms across a

series of dimensions. Results from independent sample *t-test* confirm some differences between listed and non-listed companies: listed companies tend to have larger boards (9.36) with more outsiders (66%). The *t-test* shows significant differences between family and non-family firms: FFs have smaller boards, spend less time in formal board meetings than non-family peers, and tend to operate in non-regulated industries.

Table 3 displays correlations coefficients for all variables employed. Both Spearman and Pearson coefficients are reported due to the presence of several dummy variables (Hair, et al., 2010). The correlation analysis shows mostly expected results. Larger boards tend to have higher number of outsiders, and meet more frequently. CEOs' perception of board monitoring is enhanced in listed corporations, and correlates positively to board size and outsider ratio. Results also suggest that monitoring is negatively correlated with higher firm performance, whilst it is positively associated with industry regulation. CEOs' perception of board advice increases in listed and family firms, whilst it is not correlated to any of the structural dimensions of the board. The number of board meetings positively correlates to both tasks. Furthermore, the correlation among monitoring and resource provision tasks is particularly high (0.51; $p<0.01$), suggesting that boards are active in the two tasks at the same time (van Den Heuvel, et al., 2006). These results are in line with findings from previous studies, thus increasing confidence in the suitability of the sample for the purpose of this study.

INSERT TABLE 3 ABOUT HERE

Multivariate Analyses

Tables 4 & 5 present the results of multivariate analyses. A three-step regression is employed for each of the two dependent variables. This is consistent with other studies on boards of directors (Machold, Huse, Minichilli & Nordqvist, 2011; Payne, et al., 2009), and enables capturing the additional variance explained when adding a new group of variables to the previous model. In both cases, Model 1 in Tables 4 & 5 reports the results for control variables only. Model 2 and 3 present respectively the effects of firm performance and industry regulation on board monitoring and advice. Model 4 reports the full model with controls, industry regulation and past firm performance. Variance inflation factors (VIFs) and linear dependency tests are performed in order to check for multicollinearity. None of the VIFs approach the critical threshold of 10, with the highest score approaching 2.

Model 1 in Table 4 indicates that firm and board level characteristics are not significantly associated with board monitoring. The only notable exception is the listing status of the corporation (0.57, $p<0.01$). This result is in line with existing theory and empirical findings (Payne, et al., 2009): boards in listed companies face higher pressure in performing their monitoring activities than their non-listed peers. Model 1 in Table 5 reports similar results: listing status (0.31, $p<0.05$), family ownership (.31, $p<05$) and board regulation (0.28, $p<0.05$) enhance CEO's perception of board advice. Models 2, 3 and 4 are relevant to our hypotheses.

Model 2 (Table 4) tests the effect of past firm performance on the board monitoring, and focus on the most and least profitable firms (the top and bottom quintiles respectively). Past firm performance is significantly associated with board monitoring: when running a piecewise regression with dummies for high (low) performance, results show that CEOs perceive board monitoring to be higher in poorly performing firms (.44, $p<0.05$), while it is lower in high performing firms (-.58, $p< 0.01$). When examining the effects of past firm performance on the board advice, Model 2 (Table 5) shows somewhat similar and less

pronounced results. Past firm performance affects board advice: results show that in highly performing firms boards tend to reduce their advice task (-0.36, $p<0.10$), while there is a positive, yet not statistically significant association with for poorly performing companies (.18, $p>.10$).

These results substantially support Hp1a suggesting that poorly performing firms are positively associated with board monitoring and advice task. Results provide only partial support to Hp1b and show that higher (past) firm performance significantly reduces board monitoring as well as board advice.

Model 3 in Table 4 illustrates the impact of industry regulation on the CEOs' perception of board monitoring. Two dummies are employed to capturing whether the firm operates into a highly or non-regulated industry. Results reveal that boards of companies operating in highly regulated industries are perceived to perform a monitoring task (0.39, $p<0.01$), while in non-regulated sectors, the result is not statistically significant (.03, $p>.10$). When turning attention to the impact of industry regulation on the CEOs' perception of board advice, Model 3 (Table 5) shows that greater industry regulation will also enhance board advice (0.56, $p<0.01$). These results provide partial support to Hp2a. When looking at firms operating in non-regulated industries, results are not significant with regard to both tasks: hence, we reject Hp2b positing a positive relation between low industry regulation and board advice (.06, $p>.10$), and a negative relationship with board monitoring (.03, $p>.10$).

Model 4 (Table 4 & 5) supports our hypothesis: when testing the full model for monitoring and advice tasks, both industry regulation and past firm performance are associated with CEOs' perception of board monitoring and advice. The full model shows in both cases a higher explanatory power in terms of monitoring (R^2 =0.185) and advice (R^2 =0.141) tasks.

INSERT TABLES 4 & 5 ABOUT HERE

Robustness Checks

In order to assess the sensitivity of the main results to the use of alternative specifications and analyses, a series of additional tests are performed. All tests employ the full model (Model 4) as a benchmark.

The first concern is the potential for endogeneity or reverse causality in the model. This issue is quite common in governance studies (Baghat & Bolton, 2008), and we tried to address it in a number of ways. First, the study employs lagged performance measures (up to three years prior to the administration of the survey) as predictors of board monitoring and advice tasks. This attenuates the risk that board activism in 2004 might have "caused" firm performance in 2001, 2002 and 2003. Second, the possibility of endogeneity being caused by omitted variables is ruled out by including a number of control variables that are likely to affect both CEO's perception of board monitoring and advice and firm performance (Chenhall & Moers, 2007): CEO duality, board size, outsider ratio, directors' ownership, board regulation and number of meetings. Hence, the risk of having biased and inconsistent coefficient estimates is minimized (Wooldridge, 2000). Furthermore, a formal test for the presence of omitted variables is performed by re-running the two full models with monitoring and advice tasks as dependent variables, and employing the post-estimation commands "estat ovtest" and "linktest" in STATA (Cameron & Trivedi, 2010: 92): in all cases we fail to reject the null hypothesis "H_0: the model has no omitted variables" as the $|Prob>F|$ is always non significant with the minimum value approaching .687. Third, the potential threat of simultaneity is checked by running OLS regressions where the main predictor in our model

(past firm performance) becomes the dependent variables while CEOs' perception of board monitoring and advice become the predictors (Booth, Cornett & Tehranian, 2002). The regression coefficients show that both monitoring (β= .031, p=.980) and advice (β= -.405, p=.755) tasks do not affect firm performance.

A second concern relates to the choice of return on equity (ROE) as a proxy for past firm performance; ROE captures the overall profitability of the firm and picks up firm leverage. In order to control for the potential effects of the capital structure, two alternative measures of past firm performance are employed: average return on sales (ROS) in 2001-2003 and average return on investment (ROI) in 2001-2003. Results show that changing the proxy for past firm performance (either using ROS or ROI) does not substantially alter the findings. Table 6 displays similarity across different measures of firm performance with only one minor difference: the coefficient estimates on high performing firms lose their statistical significance but keep their economic meaning (negative sign).

INSERT TABLE 6 ABOUT HERE

A third concern arises with regard to the composition of the sample as listed and unlisted companies might differ in terms of board behaviour because of more (less) stringent regulatory requirements. Therefore separate analyses on the sub-samples of listed firms only and compare results with the full sample are performed. For the sake of parsimony only results of OLS regressions on the full models (Model 4) are presented, employing board monitoring and advice tasks as the dependent variables. The results show that in the sub-sample of listed firms only (64 observations) the main effects are even more pronounced and

regression coefficients confirm that in high performing firms boards do not execute monitoring task (-1.18, $p<0.01$), while the effect on advice task is still negative but not statistically significant (-.07, $p>0.10$). On the other hand, boards in poorly performing firms enhance monitoring (.94, $p<0.01$). Likewise, when turning to the effects of industry regulation, results confirm that in highly regulated industries boards tend to be involved in monitoring (.46, $p<0.10$) and advice (.47, $p<0.10$).

INSERT TABLE 7 ABOUT HERE

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5. Discussion

Agency and resource-dependence theories suggest that boards are involved into monitoring and advice tasks (Hillman & Dalziel, 2003). The two tasks constitute the core activities in which boards engage (Geletakanycz & Boyd, 2011). Ocasio's "attention-based view" (1997) provides an appealing and theoretically sound approach to explore what boards do, proposing that boards emphasize board monitoring and advice tasks according to the contingencies they face. This study employs past performance and industry regulation as "contextual factors" and shows that boards change their engagement under varying circumstances.

The study contributes to both theory and practice: first, it provides support to the "attention-based view". Recent works by Zhang (2010), Tuggle, et al, (2010), Cho, and Hambrick (2006) found that boards selectively direct their attention to strategic, monitoring or entrepreneurial activities. We extend this line of enquiry and indicate that boards do not constantly engage into monitoring or advice tasks: more specifically, when turning attention

to the effects of past performance and industry regulation on boards' monitoring and advice, changes in the contingencies above also change the way boards shift their attention to the tasks. The most intriguing contribution comes from an in-depth examination of the relationship between past profitability and board tasks performance: past firm performance affects boards' involvement into monitoring and advice tasks, indicating the likelihood of contingencies in place. In high-performing firms, boards seem to be less engaged in both monitoring and advice tasks, while in poorly performing firms we find higher involvement in monitoring and advice tasks. This is a novel result in governance and board studies. Literature and previous works analyse what boards do in the case of firms facing crisis or turnaround situations (Daily, 1995), but very limited attention to boards in high-performing firms (Daily, et al., 2003). The present investigation suggests that boards pay less attention to their tasks when the company is performing well, thus explaining unexpected declines of very profitable organizations. Furthermore, results show that board monitoring and advice tasks are correlated and are similarly affected by firm and industry level contingencies. This is coherent with the idea of a paradox of control and collaboration suggested by Sundaramurthy, and Lewis (2003), and provides empirical support to the intuition behind Hillman, and Dalziel's work (2003) proposing an integration of agency and resource-based theory.

Industry regulation also has an effect on board tasks performance: greater industry regulation enhances board monitoring and advice tasks. Regulation imposes a higher degree of compliance to rules, standards and requirements demanded by authorities or ruling bodies, and boards act as complements rather than substitutes in this endeavour. The results support the "complementarity hypothesis" (Becher & Frye, 2011) by showing that higher regulation enhances board monitoring. Firms need to conform to requirements and bylaws imposed by regulators. The breach of regulation and failure to conform to existing rules could eventually result in high litigation costs and disruption in the business activities. Therefore boards are

required to exert higher monitoring and more closely follow-up of all initiatives run by the management (O'Donoghue, 2004). Regulation requires boards to be active in advice and counselling, as well as in networking activities, due to the importance of links with regulators, and enhancing the legitimacy and strengthening links with key players. Prior literature shows the importance of having boards acting as advisors and trying to influence the key actors, gaining access to superior information (Hillman, 2005): ultimately, these activities have positive outcomes in terms of performance. This opens up new perspectives in interpreting board dynamics and effectiveness, given that boards with similar structural features might present different level of engagement in the two tasks.

The findings from this study also have practical implications. It is often questioned why corporations with increasing profitability may experience sudden and unexpected downturns (Leblanc & Gilles, 2005). Based on the evidence provided, one possible explanation is the lack of boards' engagement in the expected tasks, thus reducing management accountability. Given the potential harm to the corporation and its shareholders, one main implication is to increase scrutiny and request of activism also in the case of high-performing companies. This is somehow contrary to the expectation that boards do not engage much in the two tasks when the corporation is performing well: ultimately, this could turn to be very detrimental and disproportionately increase the power of managerial team without adequate control. It is well-established in the literature about symbolism (Zajac & Westphal, 2001) that CEOs gain power over the board if the company is well-performing; however, this is creating a threat for the firm as boards become reluctant in carrying on their tasks.

These results open up paths for further investigation: growing anecdotal evidence shows that profitable firms turn into financial distress and disgrace at an unexpected speed. It seems that boards are more reluctant in challenging CEOs and the top management team in case the latter would guarantee high levels of profits; however, albeit this is in line with an

agency rationale, it is also very risky. Profits might mask excessive risk-taking or short-term choices (cutting maintenance costs or R&D expenditures) that might be harmful in the long-term. There are also consequences in terms of our approach to boards and governance issues: mainstream theories often call for increased board's activism to protect shareholders in the case value maximization is at a risk (Fama & Jensen, 1983). Nevertheless, managers might possibly mask bad choices by artificially increasing profits, thus limiting boards' willingness to oversight them. In poor performing firms we find a positive but non-significant association to monitoring and no relationship with resource provision task.

6. Conclusions and Limitations

Several studies have examined structural characteristics and board processes as drivers of board monitoring and advice (e.g. Kiel & Nicholson, 2004; Payne, et al., 2009), also in different institutional contexts (Minichilli, et al., 2012). However, the literature overlooked the role of potential contingencies (Filatotchev & Nakajima, 2010). This study explores the effect of past firm profitability and industry regulation on boards' monitoring and advice tasks. It moves away from the idea that board activism is a function of structural features or working style, and hypothesizes that boards' engagement into different tasks varies according to firm-level and industry specific conditions. Findings show that greater industry regulation is positively associated with monitoring and advice, while firm profitability is negatively associated to both tasks. This study contributes to theory and practice. First, boards do not always engage in board monitoring and advice tasks, but internal (performance) and external (industry regulation) factors affect their behaviour. This is consistent with the predictions of Ocasio's attention-based view of the firm (1997). Second, boards in a highly performing firm are perceived as rather passive both in monitoring and advice. Overall, boards seem reluctant to challenge CEOs and managers when firms are operating profitably. It would be interesting

investigating the reasons behind the lack of engagement and there is potential for future research.

This study has a number of limitations. The study assesses board monitoring and advice tasks as the CEOs' perception of board task performance, through a survey instrument. Despite the care in crafting the survey, wording and distribution of the items, and the number of tests to minimize the common method variance, there is an inherent risk of measuring CEOs' perceptions of the underlying phenomena, rather than what boards actually do. Data triangulation and the use of multiple responses from directors on the same board would significantly increase the validity of the constructs. Survey data are cross-sectional, thus changes in board tasks performance over time as firm profitability and industry regulation vary cannot be tracked.

The study draws data from a single country, Italy. Despite the similarities and congruence of codes and regulation with other European and Asian contexts, results might be context specific. Cross-country studies offer a more nuanced investigation of why this is likely to happen and whether boards' responses to past firm profitability and industry regulation are invariant or country-specific (Minichilli, et al., 2012). The analyses span over post-crisis period (2001 quarters 1 to 3, according to the NBER bulletin), thus potentially altering firms' and regulators' attention towards governance issues.

Table 1 Panel A: Principal Component Factor Analysis and Cronbach's Alpha

Factor (Principal Component Analysis)	Factor Loadings	Alpha
Board Monitoring Task		α=.781
The Board keeps itself informed about the financial position of the firm	.737	
The Board oversees that activities and operations are properly enacted	.830	
The Board monitors the CEO	.747	
Board Advice Task		α=.832
The Board provides advice to the management	.675	
The Board discusses alternative strategic options	.882	
The Board takes strategic decisions	.861	
The Board supervises all strategic phases	.670	

Table 1 Panel B: Controls for the CEO' self-attribution bias in assessing board task performance

	Board Monitoring Task	Board Advice Task
CEO_tenure	-.06	-.01
	(.345)	(.896)
CEO_age	-.06	.01
	(.358)	(839)
CEO_interlocks	.09	.11†
	(149)	(.77)

† sig. at p<0.10; * sig. at p<0.05; ** sig. at p<0.01.

CEO_tenure is a continuous variable that expresses the number of years the CEO has been in charge. CEO_age is a continuous variable that indicates the age of the CEO. CEO_interlocks is a continuous variable that expresses the total number of directorships held by the CEO within the relevant business group.

Table 2 : Descriptive of the Sample and Coding of Variables

Variables	*Description*	*Mean*	*SD*	*Median*	*1st quintile*	*5th quintile*	*N*
Size	It expresses the natural logarithmic transformation of firm X Turnover in 2001-2003	887,965	4,915.017	175,432	9,040	3,334.574	260
Fam[a]	It is a dummy variable indicating whether a firm is family owned (1) or not (0)	.52	.5	0			262
Listed[a]	It is a dummy variable indicating whether a firm is listed (1) or not (0)	.25	.43	0			264
inst_own	It indicates the percentage of shares owned by banks, mutual funds and venture capitalists	6.06	.177	0	0	.18	264
ceo_dual[a]	It is a dummy variable indicating whether the CEO is also the Chair of the board (1) or not (0)	.30	.46	0			264
bd_size[b]	It expresses the number of directors appointed on the Board	7.23	3.53	6	4	10	264
bd_out[a]	It expresses the ratio of independent, unaffiliated and non executive directors on the Board	.47	.34	.56	0	.80	264
bd_own	It indicates the ratio of directors with shares in the firm over the total number of directors	.21	.32	0	0	.42	264
bd_reg[a]	It is a dummy variable indicating whether the Board has a formal regulation in place (1) or not (0)	.33	.47	0			256
bd_meet	It expresses the number of Board meetings in one year	7.04	5.39	6	3.5	10	264
Profit[b]	It expresses the average ROE of firm in 2001-2003	5.87	18.48	6.15	-2.27	16.68	258
h_profit	It is a dummy variable indicating whether a firm's profitability ratio falls within the 1st quintile of the distribution of ROE	29.50	13.02				258
l_profit	It is a dummy variable indicating whether a firm's profitability ratio falls within the 5th quintile of the distribution of ROE	-19.76	15.34				258
Ind_reg	It is a 5-point scale variable. 5 indicates whether the CEO considers the firm to be operating in a highly regulated industry. 1 indicates a firm operating into a non/regulated industry	2.98	1.55				264
h_ind_reg	It is a dummy variable indicating whether the firm is operating into a highly regulated industry (1) or not (0)	5					264
l_ind_reg	It is a dummy variable indicating whether the firm is operating into an unregulated industry (1) or not (0)	1					264
Monitor	It indicates the CEO's perception of board performing a monitoring task. It is computed as the mean of 3 questionnaire items.	3.55	.99	3.66			264
Advice	It indicates the CEO's perception of board performing an advice task. It is computed as the mean of 4 questionnaire items.	3.47	.93	3.5			264

[a] Indicates the variable is expressed in percentage. [b] Indicates the value has been windsorized at 5 and 95 percent.

Table 3: Correlation Matrix

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	*Size*	-	-.06	.12†	.03	.01	.16*	.15*	-.11†	-.01	.04	-.05	-.08	.05	.01	.00	.01	-.01	.01
2	*Fam*[a]	-.11†	-	.10	.15*	-.02	-.11†	-.10†	.44**	-.17**	-.12	-.02	-.09	.02	-.25**	.24**	-.20**	.01	.14*
3	*Listed*[a]	.22**	.08	-	.27**	.07	.38**	.32**	-.01	-.04	.25**	-.13†	-.20**	.10	.07	-.05	.04	.29**	.11†
4	*inst_own*	.01	-.03	.11†	-	.02	.12†	.16*	.02	-.06	.07	-.11†	-.12†	.14*	-.09	-.14*	.03	.04	.00
5	*ceo_dual*[a]	-.01	-.01	-.06	-.04	-	-.04	-.09	-.11†	-.12†	.12†	.06	.01	-.11†	.05	-.03	.06	-.05	.04
6	*bd_size*[b]	.22**	-.15*	.35**	.08	-.01	-	.55**	-.07	-.07	.19**	.06	-.18**	.02	.09	-.02	.08	.23**	-.01
7	*bd_out*[a]	.17**	-.09	.33**	.16**	-.09	.57*	-	-.06	-.07	.20**	-.13†	-.13†	.10†	.09	-.04	.03	.16*	-.10
8	*bd_own*	-.15*	.34**	-.13*	-.03	-.06	-.21**	-.17**	-	-.11†	-.05	.05	.02	-.05	-.09	-.08	.06	.05	.10
9	*bd_reg*[a]	.01	-.15*	-.05	.05	-.11†	-.02	-.07	-.07	-	-.01	-.03	.06	.10†	-.00	-.06	-.04	.05	.10
10	*bd_meet*	.09	-.11†	.08	.02	.08	.08	.09	.09	.03	-	-.06	-.14*	-.00	.29**	-.27**	.21**	.15*	.11†
11	*Profit*[b]	-.06	-.04	-.15*	-.10†	.06	-.05	-.16**	-.16*	.00	-.05	-	.61**	-.71**	.04	-.01	.03	-.06	-.05
12	*h_profit*	-.09	-.08	-.19**	-.06	.01	-.18**	-.15*	-.15*	.06	-.03	64**	-	-.24**	.05	.02	.06	-.15**	-.08
13	*l_profit*	.03	.02	.11†	.05	-.10†	.01	.08	.09	.10	-.05	-.69**	-24**	-	-.06	-.00	-.10†	.07	.02
14	*Ind_reg*	.15*	-.22**	.07	-.08	.03	.16*	.10	.10	.01	.21**	.08	.05	-.05	-	-.79**	.76**	.17*	.09
15	*h_ind_reg*	-.11†	.24**	-.05	-.12*	-.03	-.10	-.05	.04	-.06	-.15*	.01	.02	-.01	-.78**	-	-.38**	-.05	-.02
16	*l_ind_reg*	.14*	-.21**	.03	.00	.03	.11†	.04	-.05	-.02	.19**	.06	.06	-.10†	.73**	-.35**	-	.20**	.19**
17	*monitor*	.09	-.05	.28**	-.03	-.07	.21**	.16**	.16**	.07	.13*	-.04	-.16**	.06	.17**	-.07	.18**	-	.46**
18	*advice*	.07	.11†	.12†	-.03	.02	-.08	-.06	-.06	.12*	.10†	-.04	-.10	.04	.17†	-.02	.18**	.51**	-

† sig. at p<0.10; * sig. at p<0.05; ** sig. at p<0.01.

The coefficients below the diagonal report Person-product moment correlation; the coefficients above the diagonal report Spearman's Rho correlation. Monitor and Advice are are computed respectively as the average value of CEOs' responses to 3 and 4 questionnaire items. The main predictors are (i) past firm performance (*profit)* measured as the average ROE in years t-2, t-1, t; *h_profit (l_profit)* are dummies indicating whether the firm past profitability falls in the top (bottom) quintile of the distribution. (ii) Industry regulation is measured through the CEO's assessment of the overall level of regulation in the firm's main business; *h_ind_reg (l_ind_reg)* is a dummy variable indicating whether the firm operates in high (low) regulated sectors. Control vari ables are the following: *size* is the log transformation of the average turnover in t-2, t-1, t; *fam* is a dummy variable indicating whether one family holds at least 30% of shares; *listed* is a dummy variable indicating whether the company was consistently listed on the stock market in t-2, t-1, t; *inst_own* indicates the total percentage of shares held by banks, mutual funds and venture capitalists; *CEO_dual* indicates whether the CEO is also the CHAIRPERSON; *bd_size* expresses the total number of directors appointed (this variable is windsorized at 95%); *bd_outs* is the ratio of independent, unaffiliated and non-executive directors over the total number of directors; *bd_own* is the ratio of directors owning shares in the firm over the total number of directors; *bd_reg* is a dummy variable indicating whether the board has a formal regulation in place disciplining how it operates; *bd_meet* indicates the number of board meetings in the year prior to the questionnaire.

Table 4: The effects of past performance & industry regulation on board monitoring task.

DV: board monitoring	Model 1 *Control*	Model 2 *Past Performance*	Model 3 *Industry Regulation*	Full Model
Size	-.01	-.01	-.02	-.02
	(-.26)	(-.36)	(-.61)	(-.64)
Fam	-.02	-.07	.03	-.01
	(-.18)	(-.52)	(.20)	(-.02.)
Listed	.57**	.53**	.56**	.51**
	(4.12)	(3.94)	(4.12)	(3.93)
inst_own	-.52	-.53†	-.39	-.35
	(-1.55)	(-1.70)	(-1.15)	(-1.13)
ceo_dual	-.11	-.09	-.14	-.10
	(-.87)	(-.72)	(-1.06)	(-.79)
bd_size	.03	.03	.03	.02
	(1.57)	(1.28)	(1.42)	(1.19)
bd_out	.03	.11	.09	.12
	(.33)	(.52)	(.41)	(.59)
bd_own	.15	.25	.11	.22
	(.65)	(1.07)	(.49)	(1.02)
bd_reg	.18	.17	.19	.20
	(1.45)	(1.35)	(1.52)	(1.59)
bd_meet	.02	.02†	.01	.02
	(1.45)	(1.76)	(.86)	(1.27)
Profit		.01*		.01*
		(2.30)		(2.51)
h_profit		-.58**		-.61**
		(-2.66)		(-2.80)
l_profit		.44*		.49*
		(2.01)		(2.34)
h_ind_reg			.39**	.45**
			(2.48)	(2.92)
l_ind_reg			.03	.08
			(.23)	(.57)
Intercept	3.08**	3.09**	3.18**	3.08**
	(6.98)	(6.44)	(7.11)	(6.44)
N	**247**	**247**	**249**	**247**
Industry dummies	**Yes**	**Yes**	**Yes**	**Yes**
R^2	**.124**	**.155**	**.142**	**.185**
F-Change	**3.89****	**4.04***	**3.95****	**4.33****

† sig. at p<0.10; * sig. at p<0.05; ** sig. at p<0.01. Table 4 reports OLS regression coefficients and robust t-stat (in parenthesis). The DV is board monitoring: this is computed as the average value of CEOs' responses to 3 questionnaire items. The main predictors are: (i) past firm performance (*profit)* is the average ROE in years t-2, t-1, t; *h_profit (l_profit)* are dummies indicating whether the firm ROE falls in the top (bottom) quintile of the distribution. (ii) Industry regulation is the CEO's assessment of the overall level of regulation in the firm's main business; *h_ind_reg (l_ind_reg)* is a dummy variable indicating whether the firm operates in high (low) regulated sectors. Control variables are: *size* is the log transformation of the average turnover in t-2, t-1, t; *fam* is a dummy indicating whether one family holds at least 30% of shares; *listed* is a dummy indicating whether the company was listed on the stock market in t-2, t-1, t; *inst_own* indicates the total % of shares held by banks, mutual funds and venture capitalists; *CEO_dual* indicates whether the CEO is also the CHAIRPERSON; *bd_size* is the total number of directors appointed (this is windsorized at 95%); *bd_outs* is the ratio of independent and non-executive directors over the total number of directors; *bd_own* is the ratio of directors owning shares over the total number of directors; *bd_reg* is a dummy indicating whether the board has a formal regulation disciplining how it operates; *bd_meet* indicates the number of meetings in the year prior to the questionnaire.

Table 5: OLS Regression. The effects of past performance & industry regulation on board advice task

DV: board advice	Model 1 *Control*	*Model 2 Past Performance*	*Model 3 Industry Regulation*	Full Model
Size	.05	.04	.03	.03
	(1.31)	(1.21)	(.99)	(.88)
Fam	.19	.15	.30**	.25*
	(1.47)	(1.18)	(2.34)	(1.84)
Listed	.31*	.29*	.31**	.27*
	(2.63)	(2.42)	(2.62)	(2.25)
inst_own	-.15	-.15	.06	.05
	(-.43)	(-.43)	(.19)	(.15)
ceo_dual	.06	.07	.02	.06
	(0.42)	(.50)	(.16)	(.44)
bd_size	-.02	-.03	-.03†	-.03†
	(-1.31)	(-1.42)	(-1.73)	(-1.82)
bd_out	-.15	-.13	-.14	-.11
	(-.75)	(-.65)	(-.74)	(-.57)
bd_own	.18	.23	.09	.21
	(.79)	(.99)	(.41)	(.93)
bd_reg	.28*	.28*	.33**	.32**
	(2.33)	(2.32)	(2.73)	(2.63)
bd_meet	.02	.02†	.01	.01
	(1.62)	(1.78)	(0.92)	(1.07)
Profit		.01		.01
		(1,27)		(1.52)
h_profit		-.36†		-.39*
		(1.67)		(1.98)
l_profit		.18		.24
		(.92)		(1.28)
h_ind_reg			.56**	.56**
			(3.97)	(4.02)
l_ind_reg			.06	.08
			(0.48)	(.51)
Intercept	2,70**	2.75**	2.72**	2.75**
	(6.07)	(6.03)	(6.21)	(6.14)
N	**247**	**247**	**249**	**247**
Industry dummies	**Yes**	**Yes**	**Yes**	**Yes**
R^2	**.077**	**.089**	**.133**	**.141**
F-Change	**2.68****	**2.39***	**4.05****	**3.45****

† sig. at p<0.10; * sig. at p<0.05; ** sig. at p<0.01. Table 4 reports OLS regression coefficients and robust t-stat (in parenthesis). The DV is board advice: this is computed as the average value of CEOs' responses to 4 questionnaire items. The main predictors are: (i) past firm performance (*profit)* is the average ROE in years t-2, t-1, t; *h_profit (l_profit)* are dummies indicating whether the firm ROE falls in the top (bottom) quintile of the distribution. (ii) Industry regulation is the CEO's assessment of the overall level of regulation in the firm's main business; *h_ind_reg (l_ind_reg)* is a dummy variable indicating whether the firm operates in high (low) regulated sectors. Control variables are: *size* is the log transformation of the average turnover in t-2, t-1, t; *fam* is a dummy indicating whether one family holds at least 30% of shares; *listed* is a dummy indicating whether the company was listed on the stock market in t-2, t-1, t; *inst_own* indicates the total % of shares held by banks, mutual funds and venture capitalists; *CEO_dual* indicates whether the CEO is also the CHAIRPERSON; *bd_size* is the total number of directors appointed (this is windsorized at 95%); *bd_outs* is the ratio of independent and non-executive directors over the total number of directors; *bd_own* is the ratio of directors owning shares over the total number of directors; *bd_reg* is a dummy indicating whether the board has a formal regulation disciplining how it operates; *bd_meet* indicates the number of meetings in the year prior to the questionnaire.

Table 6: Robustness checks using alternative specifications for Past Firm Performance

	Past Performance: ROE		*Past Performance: ROS*		*Past Performance: ROI*	
	Board monitoring	*Board Advice*	*Board monitoring*	*Board Advice*	*Board monitoring*	*Board Advice*
$ROE_{2001-2003}$	.01*	.01				
	(2.51)	(1.52)				
H_perf(ROE)	-.61**	-.39*				
	(-2.80)	(1.98)				
L_perf(ROE)	.49*	.24				
	(2.34)	(1.28)				
H_ind_reg	.45*	.56**				
	(2.34)	(4.02)				
L_ind_reg	.08	.08				
	(.57)	(.51)				
$ROS_{2001-2003}$			.03	.02		
			(2.06)	(1.04)		
H_perf(ROS)			-.16	-.07		
			(-.72)	(-.31)		
L_perf(ROS)			.34*	.01		
			(1.78)	(.07)		
H_ind_reg			.38*	.56**		
			(2.34)	(3.86)		
L_ind_reg			.01	.06		
			(.01)	(.43)		
$ROI_{2001-2003}$					.01	-.01
					(.62)	(-.69)
H_perf(ROI)					-.17	-.10
					(-.101)	(-.59)
L_perf(ROI)					-.07	-.26†
					(-.44)	(-1.84)
H_ind_reg					.39*	.54**
					(2.41)	(3.85)
L_ind_reg					.04	.08
					(.27)	(.57)

† sig. at p<0.10; * sig. at p<0.05; ** sig. at p<0.01. Table 6 provides results from robustness checks performed when using alternative specifications to the Return on Equity (ROE) as a proxy for past firm performance. Return on Sales (ROS) is the average value of ROS for any given firm in 2001, 2002, 2003. ROS is computed as the Net Income from Operations scaled by Total Sales at the beginning of the year. Return on Investment (ROI) is the average value of ROI for any given firm in 2001, 2002, 2003. ROI is computed as the Net Income from Operations scaled by Total Investment (Long Term + Short Term Asset).

Table 7: OLS Regression ('full model' only) on a subsample of Listed Firms

	Listed Firms (N=65)		*Full Sample (N=264)*	
	Board Monitoring	*Board Advice*	*Board Monitoring*	*Board Advice*
Size	.12*	.09	-.02	.03
	(2.44)	(1.65)	(-.64)	(.88)
Fam	.24	.48*	-.01	.25*
	(1.11)	(2.52)	(-.02.)	(1.84)
Listed			.51**	.27*
			(3.93)	(2.25)
inst_own	-.83*	-.64†	-.35	.05
	(2.15)	(-1.69)	(-1.13)	(.15)
ceo_dual	.07	.10	-.10	.06
	(.40)	(.52)	(-.79)	(.44)
bd_size	-.02	-.05	.02	-.03†
	(-.96)	(-1.33)	(1.19)	(-1.82)
bd_out	.26	-.36	.12	-.11
	(.63)	(-.89)	(.59)	(-.57)
bd_own	1.27**	.12	.22	.21
	(2.69)	(.21)	(1.02)	(.93)
bd_reg	-.06	.31†	.20	.32**
	(-.36)	(1.70)	(1.59)	(2.63)
bd_meet	.35	-.01	.02	.01
	(-1.19)	(-.36)	(1.27)	(1.07)
Profit	.02**	.01	.01*	.01
	(3.29)	(.58)	(2.51)	(1.52)
h_profit	-1.18**	-.07	-.61**	-.39*
	(-2.70)	(-.18)	(-2.80)	(1.98)
l_profit	.94**	.05	.49*	.24
	(4.11)	(.15)	(2.34)	(1.28)
h_ind_reg	.46†	.44†	.45**	.56**
	(1.66)	(1.73)	(2.92)	(4.02)
l_ind_reg	.51**	.22	.08	.08
	(2.74)	(1.22)	(.57)	(.51)
Intercept	1.56*	2.65**	3.08**	2.75**
	(2.68)	(3.83)	(6.44)	(6.14)
N	**65**	**65**	**247**	**247**
Industry Dummies	**Yes**	**Yes**	**Yes**	**Yes**
R^2	**.456**	**.277**	**.185**	**.141**
F-Change	**7.15****	**1.74****	**4.33****	**3.45****

† sig. at p<0.10; * sig. at p<0.05; ** sig. at p<0.01. Table 7 provides OLS regression results for the subsample of listed firms only. Table 4 reports OLS regression coefficients and robust t-stat (in parenthesis). The DVs are board monitoring (advice) computed as the average value of CEOs' responses to 3 (4) questionnaire items. The main predictors are: (i) past firm performance (*profit)* is the average ROE in years t-2, t-1, t; *h_profit (l_profit)* are dummies indicating whether the firm ROE falls in the top (bottom) quintile of the distribution. (ii) Industry regulation is the CEO's assessment of the overall level of regulation in the firm's main business; *h_ind_reg (l_ind_reg)* is a dummy variable indicating whether the firm operates in high (low) regulated sectors. Control variables are: *size* is the log transformation of the average turnover in t-2, t-1, t; *fam* is a dummy indicating whether one family holds at least 30% of shares; *listed* is a dummy indicating whether the company was listed on the stock market in t-2, t-1, t; *inst_own* indicates the total % of shares held by banks, mutual funds and venture capitalists; *CEO_dual* indicates whether the CEO is also the CHAIRPERSON; *bd_size* is the total number of directors appointed (this is windsorized at 95%); *bd_outs* is the ratio of independent and non-executive directors over the total number of directors; *bd_own* is the ratio of directors owning shares over the total number of directors; *bd_reg* is a dummy indicating whether the board has a formal regulation disciplining how it operates; *bd_meet* indicates the number of meetings in the year prior to the questionnaire.

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